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Introduction

It is no secret that higher education in the United States is, if not in a state of crisis, certainly experiencing serious and wide-ranging challenges. Aside from escalating costs, one major challenge is the uneven quality of undergraduate classroom instruction, which impedes and limits student learning. A second, related challenge is the inadequate attention being paid to the craft of teaching by faculty hired and promoted for their research, grants, and publications. In some cases lack of support for teaching is a function of college and university culture; in others it results from insufficient resources directed toward the university's teaching mission.

The nature and quality of a student's experience in higher education has a dramatic impact on his or her future—and not just future earnings and job opportunities. Students' potential for personal and professional growth, development, and happiness are also affected. We work from the premise that higher education—higher learning—can alter students' perception of themselves, and especially their perception of their talents and capabilities. Quality education, grounded in effective teaching and resulting in productive, transformative learning, is the ultimate life-changer. We wrote *The Craft of College Teaching* to provide guidance for instructors looking for ways to improve their students' ability not only to achieve academic success, but also to engage in meaningful, authentic, long-lasting learning.

A number of recent and important books have noted the serious challenges faced today by higher education in the United States. In *The Struggle to Reform Our Colleges* (2017), Derek Bok poses key questions about the quality of higher education with respect to pedagogical concerns, asking "how responsive is the curriculum to the evolving needs of students and society" and "how effective are the methods instructors use to help their students learn" (p. 21). Bok questions the extent to which students are acquiring useful kinds of knowledge and mastering the skills necessary for success in subsequent learning, especially for professional study and work (p. 28). Some of his recommendations for improving student learning,

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such as aligning learning goals with curriculum and assignments (p. 37) and adopting active learning instructional methods (p. 39), are among those we take up in some detail.

Steven Brint echoes Bok's concerns and adds others in *Two Cheers for Higher Education* (2018), where he identifies a number of problems that hinder student learning. These include students' declining commitment to study along with a consumerist mentality driven by the high cost of higher education and the demands of the marketplace (pp. 289, 303). Brint highlights three pathologies of learning that interfere with student learning, when they don't inhibit it outright: amnesia, fantasia, and inertia (p. 305). His prescription for curing these ailments are those we advocate: providing motivation for student learning, teaching for deep understanding, and requiring students to apply their knowledge in presentations, performances, and the creation of written products (p. 306). Bok and Brint both advocate for an increased emphasis on learning science and on the "scholarship of teaching." This term was coined by Ernest Boyer in his influential *Scholarship Reconsidered* (1990), in which he includes teaching as one of four domains of scholarship—the others being discovery, integration, and application. Boyer argues that higher education administration and faculty need to move beyond the "tired old teaching versus research debate and define, in more creative ways, what it means to be a scholar" (Boyer, p. xii, quoted in Brint, p. 298).

One way of thinking about the relationship between scholarship and teaching is to look at teaching as a form of scholarship—or "scholarship in action," as Ann E. Berthoff (1981) has suggested (p. 115). The integration of scholarship and teaching is echoed in another Carnegie Foundation publication, "Stewards of the Discipline," in which Chris Golde and George Walker suggest that academic disciplines require stewardship, which is accomplished when scholars apply the new knowledge they generate and conserve through their writing and their teaching (Levenson 2018, p. 52).

Leon Botstein (2018), in a recent issue of *Liberal Education*, argues that "the dichotomy between research and teaching is false." Botstein suggests that new discipline-specialist scholars need training to enable them to connect with their students. We suggest that the kind of training needed is a grounding in pedagogy, part of which comes from research in learning science, part of which derives from reflection on classroom teaching practices, and part of which emerges from sustained discussion of pedagogy with teaching colleagues.

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As Derek Bok (2017) points out, the problems associated with student learning are compounded by the challenges of providing all students with opportunities to enroll regardless of their race and income (p. 20). A related challenge is to match students with the higher education institution that best enables them to fulfill their academic and general human potential. Former longtime NYU president John Sexton (2019) notes that students from the bottom economic quartile who do attend college tend to be "undermatched" (p. 138)—that is, they enroll in schools with less advanced and demanding programs than these students can handle and benefit from. Another problem is that faculty instructors, full- and part-time, tenured and nontenured, do not receive the help they need to teach effectively the diverse student populations they meet in their classrooms.

We aim to extend and apply the significant research about teaching practices that leads to deeper and more enduring student learning. The best of this research has been captured in a dozen recent and recently revised books; though valuable resources, these books go only part of the way toward providing college instructors, especially those lacking experience, with what they need to become effective teachers. Our book complements and supplements these resources, especially the briefer ones. A number of these books cover every imaginable teaching topic, making them useful as encyclopedic references but less than ideal as an introduction to the essentials of college teaching. Drawing on the best learning science research, we offer a compact, readable, user-friendly book that provides instructors with a basic practical guide to teaching and learning across the spectrum of challenges that teachers and students confront together in the classroom.

As Maryellen Weimer (1999) pointed out more than twenty years ago, research "debunks the myth that nobody knows what makes teaching effective" (p. 7). We have drawn on both earlier research that Weimer cites and on more recent research in learning science. Like Weimer, we believe that some teaching practices yield more effective student learning than others. We also concur with Weimer that beyond particular pedagogical strategies and teaching techniques, we can improve our teaching by demonstrating knowledge and love of our subject, sharing an enthusiasm for teaching and learning, and carefully preparing and organizing our classes and courses (p. 7). These general qualities are necessary, but not sufficient; we also need to develop an ability to stimulate our students' curiosity, to provoke their thinking, and to explain ideas and concepts clearly

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and effectively. We address these and other related pedagogical challenges throughout this book.

For *The Craft of College Teaching* to be of real use and value to instructors, however, it needs to speak to the needs of the students who populate their courses. Just who are the students attending college and university programs today? Many of them are first-generation higher education attendees. Some are veterans, and many have jobs and support families. We now see among our students more of those with disabilities and mental health challenges, more LGBTQ students, more women, more Latinx students, and more students for whom English is not their native language. They include commuters, transfers, and international students. The new normal in college and university classrooms is now a wide range of students representing a broad and diverse population.

We are long past the time when students made up a homogeneous group of any kind in our classrooms. A significant challenge for teachers, therefore, is maximizing the benefits of a diverse student population while addressing their pedagogical needs. The first thing to note is that diversity as a concept is itself diverse. We need to think about the diversity of diversity—the many ways in which our students differ among themselves in gender, race, and ethnicity; in their social and cultural backgrounds; in their academic experience and preparation; and in the ways in which their varied prior learning experiences accentuate these and other differences when they enter our classrooms.

These kinds of diversity suggest that we need to know our students—to learn who they are and how they learn—so that we can motivate them and use productive teaching strategies with them. We need to figure out how to welcome their range of differences and create a space where diverse perspectives, ideas, and values can be accommodated and validated.

This openness speaks to a fundamental principle of teaching: the importance of creating an environment in which all students feel included and are confident in presenting their ideas and conveying their feelings, and in which all voices can be heard.

To accommodate this diverse array of students we need to do a number of things. We need to provide special support for non-native speakers and include course materials that reflect the diversity of students' linguistic and cultural backgrounds. We need to introduce forms of community engagement, including service learning. We need to lecture less and use techniques of active, engaged learning more. We need to get to know students' needs and concerns and to establish clear classroom policies that

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support student learning. And we need to carefully model and explain what quality academic work looks like and how to produce it.

We can use case studies and other kinds of scenarios to generate discussion. We can have small-group discussions and then come together as an entire class to hear what was said in the small groups. We can use theater to engage students with issues of diversity. We can provide faculty colleagues with coaching and guidance in facilitating discussions of diversity. We can include and reference research on diversity and include a statement about diversity on the syllabus. We have to think seriously and practically, individually and collaboratively, about how to meet our students where they are and how to help them achieve the academic success of which, with our help, they are capable.

In a book about reading literature with autistic individuals, *See It Feelingly*, Ralph James Savarese explains how and why providing an enabling environment, with support, accommodation, and routine, increases students' chances for academic success. Savarese urges those who work with students on the broad spectrum of autism to understand that autistic individuals are heterogenous, just like other learners. And as with other kinds of challenges teaching presents for our students' learning, we need to see difference and not dysfunction in their academic abilities (p. 94).

The Craft of College Teaching was developed from the workshops we conduct at New York University for full- and part-time faculty and for graduate students and postdocs on a wide range of classroom teaching practices. We offer these workshops a dozen times a year and attract participants from the university's eleven schools and three institutes. One of the special features of our workshops is that instructors and graduate students from liberal arts disciplines join those from business and engineering, nursing and dentistry, social work and social policy, education, the performing arts, and professional studies in exploring pedagogical challenges they face, whatever the level of their students or the size of their classes.

Our workshops are interactive and inquiry-based. They require reflection and writing. And they alternate small-group conversations with large-group, full-room discussion. Our role as facilitators of these pedagogical inquiries has enabled us to listen and learn from experienced colleagues as they share their teaching practices, as well as to provide suggestions from our own combined sixty-plus years of teaching across a dozen secondary and higher education institutions.

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We typically begin our two-hour workshop sessions with a fundamental question that pertains to that day's topic. For example, for our workshop on syllabus and course design we ask: "What is a syllabus?" "What is your concept of a syllabus; how do you conceive of it?" "What does a syllabus do?" These questions provoke thoughtful reflection among participants, which they then share briefly with one or two others. During the full-room discussion (usually of thirty or more participants) that follows these small-group conversations, we explore the ramifications and implications of the various syllabus metaphors that participants give us. You will find some of the fruits of that discussion in chapter 2, "Course, Syllabus, and Lesson Design," and in interlude 2, "Metaphors of Teaching." Our goal in generating discussion with fundamental questions about pedagogy is to make instructors more deliberate about their teaching concepts, principles, and practices. We then provide suggestions for how they might modify their practice to improve their students' learning.

The learning science research that underlies our suggestions for improving undergraduate teaching in this book represents the conjunction of theory and practice—practice grounded in theory and theory tested in classroom practice. Splitting theory from practice results in a dysfunctional pitting of academic theorists against clinical practitioners, to the benefit of neither and the detriment of both. By finding its fulfillment in the art of teaching practice, learning theory can enable a fruitful dialectic between art and science, with teaching the testing ground of theory.

At many colleges and universities nationwide and beyond, centers for teaching and learning perform the service of bridging theory and practice. We have benefited from meeting colleagues from a number of these centers, and from perusing the useful resources and advice they provide online. Among those we find ourselves revisiting are those associated with Assumption College, Brown University, Columbia University, Harvard University, Princeton University, Purdue University, Stanford University, the University of Kansas, the University of Michigan, Washington State University, Washington University in St. Louis, and a number of others. These and other teaching and learning centers are at the forefront in providing support for new and experienced faculty across a wide range of pedagogical challenges that instructors confront in their classrooms and in their professional lives more generally every day. The trick is making academic departments aware of their services and then getting instructors to use them.

The pedagogy we advocate derives from our work during the past six years at the New York University Center for the Advancement of

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Teaching. Our pedagogy derives, as well, from our epistemology. As Berthoff (1981) suggests, "Pedagogy always echoes epistemology: the way we teach reflects the conception we have of what knowledge is and does," how knowledge is acquired and deepened, and "how we think about thinking" (p. 11). The pedagogy we present in *The Craft of College Teaching* reflects a view of teaching as an organic rather than a mechanical activity, a point that we regularly highlight and advocate in our teaching workshops.

Our teaching recommendations arise from our understanding of how learning actually occurs in the classroom and out. The practices we encourage reflect our beliefs about what education is for. They also testify to our conviction that true learning arises from intrinsic motivation; that it is animated by desire and fostered by active engagement; that it is best nurtured in community, in collaboration with others; and finally, that if it is to matter, learning must become for students a long-lasting habit.

We hope that you find our reflections and recommendations regarding the art and science of teaching and learning of use and value. We know from long experience that teaching and learning are inextricably intertwined, and that successful teaching and learning require sustained, deliberate effort over the course of a lifelong career. They require, as Henry David Thoreau once wrote about the skill of reading well, "a training such as the athletes underwent, the steady intention almost of the whole life" (Thoreau 1854/1989, p. 403).

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